

Curriculum Vitae

Name: Marek Adam Zieliński

Affiliation:

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Academic Degrees:

- MS (Physics), Jagellonian University, Cracow (Poland), 1974
- PhD (Physics), Jagellonian University, Cracow (Poland), 1978
- Habilitation Degree in High Energy Physics, Institute for Nuclear Research, Cracow (Poland), 1987

Employment History:

- Department of Theoretical Physics, Jagellonian University, Cracow:
Assistant, 1974-1975
(followed by 3 years of graduate school)
- Department of Applied Numerical Methods, Jagellonian University, Cracow:
Senior Assistant, 1978-1979
Assistant Professor, 1979-1990
(on leave of absence 1981-1983, 1987-1990)
- Department of Physics and Astronomy, University of Rochester, Rochester, NY:
Research Associate, 1981-1983
Visiting Senior Research Associate, July-September 1985, July-September 1986
Senior Research Associate, August 1987-present

Professional Experience:

- Editor for Acta Physica Polonica (1978-1990)
- Member of Scientific Council of the Institute of Computer Science, Jagellonian University, 1984-1985

- Member of the Senate Commission for Social Issues, Jagellonian University, 1985-1987
- Referee for Physical Review and Physical Review Letters
- In charge of E272 Partial Wave Analysis effort
- Leader of E706 photon reconstruction and analysis, 1987-1997
- Head of DØ calorimeter software group, 1997-2000
- Head of DØ calorimeter simulation group, 1997-2000
- Co-convenor of Tau Channel Working Group at DØ New Phenomena Workshop, UC Davis, Davis, CA, 1998
- Leader of DØ Run 1 Direct Photon group, 2000-2001
- Chair of DØ Editorial Board on "Direct photon production at 630 GeV", 2000-2001
- Member of several DØ Editorial Boards
- Co-organizer of Calorimetry Session at DØ Workshop, Northern Illinois University, De Kalb, IL, 2000
- Co-convenor of DØ QCD Physics Group, 2000-2002
- Co-chair of DØ Calorimeter Task Force, August 2002 – February 2003
- Co-leader of DØ Top-Group Monte Carlo effort, 2002-present
- Co-convenor for "Multi-Hadron Final States" session at International Workshop on Deep Inelastic Scattering, DIS 2002
- DØ representative to the Tevatron Working Group on Issues in QCD (since 2000)
- Co-organizer of joint DØ/CDF/Theory Fermilab Workshops on Run 2 Jet Algorithms (since 2001)
- DØ liaison for Fermilab Workshops on Matrix Elements and Monte Carlo Tuning (since 2002)

Research Experience:

Theory and Phenomenology

I started research activities in high energy physics as a theorist. My Master's and PhD theses were concerned with theory and phenomenology of particle production in high energy interactions, particularly within the frameworks of the quark model and perturbative QCD. This background has proven invaluable when, later on, I made a

transition to the world of experimental physics and became involved in analyses of data, as outlined below.

Fermilab Fixed Target Program

Meson Spectroscopy and Radiative Transitions – E272, E781

I joined the Rochester group for the first time in 1981 to participate in the experiment E272 at Fermilab. In the course of my work on E272, I gained extensive experience in analysis of experimental data on meson excitation in the nuclear Coulomb field and on diffractive interactions of pions with nuclei. My research on E272, in collaboration with physicists from several institutions, resulted in determination of radiative decay widths of ρ , b_1 , a_1 , a_2 , and K^* mesons and in measurements of diffractive production cross sections on nuclei by a 200 GeV pion beam. I was primarily responsible for the Partial Wave Analysis of coherent three-pion production on nuclei and for the first determination of the radiative width of the a_1 meson.

My theoretical propensity compelled me to take a broader view at the totality of results from E272 in the context of other data on meson radiative transitions and relevant theoretical frameworks. This resulted in a comprehensive review article on the subject and constituted the foundation of my habilitation thesis. In the following years, I continued this line of research as a member of the Fermilab experiment E781, leading to the new determination of the radiative width of the a_2 meson via the Primakoff production process.

QCD, Direct Photons, and Heavy Flavors – E706, E672

The next step in my participation in the Fermilab fixed target program was experiment E706. A major goal of this effort was to test QCD predictions for direct photon production and to scrutinize its impact on determination of gluon distributions in nucleons and pions. My primary involvement concerned large momentum-transfer production of direct photons and neutral mesons. This project allowed me to develop considerable expertise on a variety of problems in reconstruction and analysis of electromagnetic showers and in interpretation of data in the framework of QCD. Major areas of my responsibility at E706 were analysis of the data, overseeing the work of graduate students, and software development. I was in charge of software for the reconstruction of electromagnetic signals from the E706 lead and liquid-argon calorimeter. This was crucial to the success of the E706 effort. I also led aspects of data analysis and Monte Carlo simulations.

The work on the final stage of data analysis provided for many enlightening and enjoyable interactions with QCD practitioners. Initial results on inclusive production of direct photons, π^0 and η mesons, and properties of associated jet systems have long-since been published; several final papers are being prepared for publication. Results from E706 have received significant attention from theorists and phenomenologists, as well as from the heavy-ion community at RHIC, with one of our papers about to cross the threshold of the SPIRES “famous” category (98 citations to date).

I also took part in the research program of experiment E672 on hadronic production of states containing charm and bottom quarks. E672 and E706 shared the Meson West Spectrometer and operated in tandem, which led to close collaboration of the two teams.

Fermilab Collider Program – DØ

Calorimetry and Software Development

Currently, I am focused on the DØ collider experiment at Fermilab. In the period leading to the start-up of Run 2, I was responsible for the simulation of the calorimeter detectors and headed the calorimeter-software group. Later, when DØ experienced a significant deterioration in the quality of objects reconstructed in the calorimeter after the zero-suppression threshold for readout was lowered in July 2002, I was appointed a co-chair of the Calorimeter Task Force. The Task Force was charged to investigate a wide range of issues in the performance of calorimeter hardware and software. For the period of six months, I was coordinating work on modifications of jet reconstruction and several other software and hardware related issues. Developments, including the implementation of better energy-weighting factors to reflect the status of the electronics, corrections for non-linearity of response, and refinements of simulation software and offline zero-suppression provided a greatly improved understanding of the low-energy response, reconstruction, and simulation of calorimeter signals.

Jet Physics and QCD

My first major engagement in Run 2 physics issues at DØ was as co-convener of the QCD Physics Group for the initial two years of Run-2 activities. I helped to establish its physics priorities and goals, and coordinated the work of graduate students and other collaborators in this area. I also guided the detailed studies of jet-triggered events and of jet properties, essential not only for physics analyses but also for commissioning of the calorimeters. These studies proved indispensable for resolving hardware problems, gauging the response and resolution of the detector, verifying the energy scale for the calorimeter, and monitoring the characteristics of calorimeter triggers. They provided crucial feedback for debugging and tuning of this critical DØ subsystem.

I was directly involved in the analyses of inclusive jet and di-jet cross sections and guided two graduate students working on these topics. As a consequence of this effort, preliminary results on inclusive jet p_T spectra from Run 2 were approved by a DØ Editorial Board for first presentation at the spring 2003 conferences. With significantly more data expected to accumulate in Run 2, the results on the inclusive jet cross section will provide powerful constraints on global fits to parton distributions within the nucleon and, especially, on contribution from gluons. Distribution in di-jet mass is of particular interest in searching for quark substructure or any hypothetical heavy resonances – a long-sought possibility for physics beyond the standard model. Although my current involvement in the QCD analyses is diminishing in favor of work on the physics of the top quark, it is gratifying that the effort I expended has already established the procedures needed for carrying out this research program in Run 2.

Top-Quark Physics and Monte Carlo

During Run 1 of DØ, I had the opportunity to focus briefly on a search for the top-quark signal in all-jets decay channel. Building on my Run 1 interest in the top-quark

physics and exploiting my considerable experience with QCD and Run 2 calorimeter issues that have direct relevance to top studies, I have become increasingly dedicated to the DØ Top Physics Group.

Since the fall of 2002, I have served as co-leader of the Monte Carlo subgroup of the Top Group. I have been in charge of coordinating the requests and generating signal and background Monte-Carlo samples for the measurements and studies within the Top Group. The broad range of my responsibilities includes implementing, verifying, and maintaining a variety of software tools needed for this purpose, in coordination with the DØ simulation and computer-farm production efforts. This role requires frequent interactions with the leadership of the Top Group and of the Production, Properties, and b-tagging subgroups. To my great pleasure, it also involves regular discussions with phenomenologists who are developing the relevant programs and interactions with colleagues at CDF. My participation in Fermilab Workshops on Matrix Element Techniques and Monte Carlo Tuning serves well to complement this work.

Teaching Experience:

While employed at my Alma Mater, the Jagellonian University, I had regular teaching responsibilities, primarily at the undergraduate level. I taught several courses in physics and in application of numerical methods to students majoring in computer science and physics. At Fermilab, I interacted with more than 50 graduate students on a wide range of projects. I have found my daily work with the students and overseeing their progress among the most satisfying and rewarding experiences. I consider the educational aspects of my work both exhilarating and beneficial, certainly for me and, hopefully, also for the students involved.

Presentations at Conferences and Workshops:

- M. Zieliński, "Jet and Photon Physics at DØ," presented at the 31st International Conference on High-Energy Physics (ICHEP 2002), Amsterdam, July 2002, Elsevier Science B.V., eds. S. Bentvelsen, P. de Jong, J. Koch and E. Laenen (2003), p. 312.
- M. Zieliński, "Jets Everywhere: Summary of Jet Results from Hera, Tevatron, and LEP Presented at Multi-Hadron Final States Session," plenary presentation at the 10th International Workshop on Deep Inelastic Scattering (DIS2002), Cracow, 2002.
- M. Zieliński, "QCD at the Tevatron," invited presentation at the International Workshop on Low-x Physics, Cracow, 2001.
- M. Zieliński, "QCD Program at DØ," invited presentation at the CTEQ Collaboration Meeting, Argonne, IL, 2001.
- M. Zieliński, "Photon and Pion Production at High p_T ," presented at the 7th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2000),

Quebec City, AIP Conference Proceedings 549, eds. Z.Parsa and W. Marciano (2001), p. 527.

- M. Zieniński, "On Direct-Photon and Pion Production," presented at QCDNET 2000, Paris, 2000.
- M. Zieniński, "Study of Direct Photon and Pion Production," presented at DPF 2000, Columbus, OH, published in International Journal of Modern Physics A, Vol. 16, Suppl. 1A, 232, 2001.
- M. Zieniński, in U. Baur *et al.*, "Report of the Working Group on Photon and Weak Boson Production," published in Proceedings of the QCD and Weak Boson Physics Workshop in Preparation for Run II at the Fermilab Tevatron, Batavia, IL, 1999, pp. 115-164, hep-ph/0005226.
- M. Zieniński, in S. Abel *et al.*, "Report of the SUGRA Working Group for Run II of the Tevatron," the QCD and Weak Boson Physics Workshop in Preparation for Run II at the Fermilab Tevatron, Batavia, IL, 1999, hep-ph/0003154.
- M. Zieniński, "Photons and Diphotons at the Tevatron," presented at QCDNET 99, Florence, 1999.
- M. Zieniński, "Effects of Parton k_T in High- p_T Particle Production," presented at the International Conference on Hadron Structure (HS 98), Stara Lesna, Slovakia, 1998, published in Proceedings of Hadron Structure '98, pp. 436-446 and hep-ph/9811278.
- M. Zieniński, "On Large p_T Direct γ 's, π^0 's, Parton k_T and the Gluon Distribution," presented at the 10th International Workshop on Deep Inelastic Scattering (DIS 97), Chicago, AIP Conference Proceedings 407, eds. J. Repond and D. Krakauer, 1997, p. 426.
- M. Zieniński, "Parton k_T and Large- p_T Production of Direct Photons and π^0 Mesons," presented at the QCD 97 Euroconference, Montpellier, 1997, Nucl. Phys. B64 (Proc. Suppl.), 84 (1998).
- M. Zieniński, "On High p_T Direct Photons, Mesons and pQCD," presented at the 3rd International Symposium on Radiative Corrections, Cracow, 1996, Acta Phys. Polon. B28, 571 (1997).
- M. Zieniński, "Direct Photons, Mesons, k_T , and pQCD," presented at the CTEQ Symposium on Confronting QCD with Experiment: Puzzles and Challenges, Fermilab, Batavia, IL, 1996.
- M. Zieniński, "Testing pQCD in Direct Photon and Meson Production," presented at the 28th International Conference on High-Energy Physics (ICHEP 96), Warsaw, 1996, Proceedings World Scientific, eds. Z. Ajduk and A.K. Wróblewski, p. 765.

- J. Conrad, V. Papavassiliou and M. Zielinski, "Some Highlights of the Recent Fermilab Fixed Target Program of Interest to the Nuclear Physics Community," FERMILAB-CONF-95-018, presented at the NSAC/DPN Town Meeting on Nuclear Physics with Intermediate and High-Energy Hadron Probes, Argonne, IL, 1995.
- M. Zielinski, "High p_T Hadro-Production of Direct Photons, Neutral Mesons and Jets at 0.5 and 0.8 TeV," poster presentation at the 15th International Conference on Physics in Collision, Cracow, 1995.
- M. Zielinski, "Nuclear Effects in High p_T Production of Neutral Mesons and Direct Photons," presented at the 5th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 94), St. Petersburg, Florida, 1994, AIP Conference Proceedings 338, ed. S.J. Seestrom, p. 386.
- M. Zielinski, "High p_T Production of Direct Photons and Neutral Mesons," poster presentation at CAM94 Physics Meeting of the Canadian, American and Mexican Physical Societies, Cancun, 1994.
- M. Zielinski, "Large p_T Production of Direct Photons and Neutral Mesons at 0.5 TeV/c," presented at the 23rd International Symposium on Ultra-High Energy Multiparticle Phenomena, Aspen, CO, 1993, World Scientific, eds. M.M. Block and A.R. White, p. 366.
- M. Zielinski, "Large p_T Production of Direct Photons and π^0 Mesons at 500 GeV/c," presented at the 26th International Conference on High-Energy Physics (ICHEP 92), AIP Conference Proceedings 272, ed. J.R. Sanford, p. 819.
- M. Zielinski, "On Primakoff Production of the $a_1(1260)$," presented at the International Conference on Hadron Spectroscopy (HADRON 91), College Park, MD, 1991, World Scientific, eds. S. Oneda and D.C. Peaslee, p. 461.
- M. Zielinski, "Evidence for the $\pi(1300)$," presented at the International Conference on Hadron Spectroscopy (HADRON 91), College Park, MD, 12-16 Aug 1991, World Scientific, eds. S. Oneda and D.C. Peaslee, p. 427.
- M. Zielinski, "Direct Photon Production in Hadron-Induced Collisions," plenary presentation at the Symposium of the Division of Particles and Fields: New Results in High-Energy Physics, 1990 Spring Meeting of the APS, Washington, D.C., 1990.
- M. Zielinski, in R. Brock *et al.*, "Fixed Target Electroweak and Hard Scattering Physics," Workshop on Physics at Fermilab in the 1990's, Breckenridge, CO, 1989, World Scientific, eds. D. Green and H. Lubatti (1990), p. 359.
- M. Zielinski, in S. Errede *et al.*, "New Physics Opportunities Working Group," Workshop on Physics at Fermilab in the 1990's, Breckenridge, CO, 1989, World Scientific, eds. D. Green and H. Lubatti (1990), p. 503.
- M. Zielinski, in I. Hinchliffe *et al.*, "Report from the QCD Working Group," Summer Study on High Energy Physics in the 1990s, Snowmass, CO, 1988, World Scientific, ed. S. Jensen, p. 279.

- M. Zieliński, in W.-K. Tung *et al.*, “Structure Functions and Parton Distributions,” Summer Study on High Energy Physics in the 1990s, Snowmass, CO, 1988, World Scientific, ed. S. Jensen, p. 305.
- M. Zieliński, “Primakoff Production of Hybrid Mesons,” presented at the BNL Workshop on Glueballs, Hybrids and Exotic Hadrons, Upton, NY, 1988, AIP Conference Proceedings 185, ed. S.-U. Chung, p. 395.
- M. Zieliński, “New Limits on Primakoff Production of Hybrid Mesons,” presented at 2nd International Conference on Hadron Spectroscopy (HADRON 87), KEK, Tsukuba, 1987, Proceedings KEK Report 87-7, eds. Y. Oyanagi, K. Takamatsu, and T. Tsuru, p. 86.
- M. Zieliński, “Limits on Primakoff Production of Hybrid Mesons,” presented at the 23rd International Conference on High-Energy Physics (ICHEP 86), Berkeley, CA, Conference Proceedings, World Scientific, ed. S.C. Loken, and Rochester preprint UR-966.

Journal Publications:

Below, papers I co-authored as a member of the DØ Collaboration are listed separately from the remaining publications.

Publications with DØ Collaboration:

1. V. M. Abazov *et al.*, “Search for the production of single sleptons through R-parity violation in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV,” Phys. Rev. Lett. **89**, 261801 (2002).
2. V. M. Abazov *et al.*, “Multiple jet production at low transverse energies in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV,” Phys. Rev. D **67**, 052001 (2003).
3. V. M. Abazov *et al.*, “ $t\bar{t}$ production cross section in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV,” Phys. Rev. D **67**, 012004 (2003).
4. V. M. Abazov *et al.*, “Search for mSUGRA in single-electron events with jets and large missing transverse energy in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV,” Phys. Rev. D **66**, 112001 (2002).
5. V. M. Abazov *et al.*, “Improved W boson mass measurement with the DØ detector,” Phys. Rev. D **66**, 012001 (2002).
6. V. M. Abazov *et al.*, “A direct measurement of W boson decay width,” Phys. Rev. D **66**, 032008 (2002).
7. V. M. Abazov *et al.*, “Search for R-parity violating supersymmetry in dimuon and four-jets channel,” Phys. Rev. Lett. **89**, 171801 (2002).

8. V. M. Abazov *et al.*, "Search for leptoquark pairs decaying to $\nu\nu$ + jets in p \bar{p} collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **88**, 191801 (2002).
9. V. M. Abazov *et al.*, "The inclusive jet cross-section in p \bar{p} collisions at $\sqrt{s} = 1.8$ TeV using the k_T algorithm," Phys. Lett. B **525**, 211 (2002).
10. V. M. Abazov *et al.*, "Subjet multiplicity of gluon and quark jets reconstructed with the k_T algorithm in p \bar{p} collisions," Phys. Rev. D **65**, 052008 (2002).
11. V. M. Abazov *et al.*, "A search for the scalar top quark in p \bar{p} collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **88**, 171802 (2002).
12. V. M. Abazov *et al.*, "Measurement of the ratio of differential cross sections for W and Z boson production as a function of transverse momentum in p \bar{p} collisions at $\sqrt{s} = 1.8$ TeV," Phys. Lett. B **517**, 299 (2001).
13. V. M. Abazov *et al.*, "Search for single top quark production at DØ using neural networks," Phys. Lett. B **517**, 282 (2001).
14. V. M. Abazov *et al.*, "Search for new physics using QUAERO: A general interface to DØ event data," Phys. Rev. Lett. **87**, 231801 (2001).
15. V. M. Abazov *et al.*, "The ratio of the isolated photon cross sections at $\sqrt{s} = 630$ GeV and 1800 GeV," Phys. Rev. Lett. **87**, 251805 (2001).
16. V. M. Abazov *et al.*, "Search for first-generation scalar and vector leptoquarks," Phys. Rev. D **64**, 092004 (2001).
17. V. M. Abazov *et al.*, "Search for heavy particles decaying into electron positron pairs in p \bar{p} collisions," Phys. Rev. Lett. **87**, 061802 (2001).
18. V. M. Abazov *et al.*, "Direct search for charged Higgs bosons in decays of top quarks," Phys. Rev. Lett. **88**, 151803 (2002).
19. B. Abbott *et al.*, "High- p_T jets in \bar{p} p collisions at $\sqrt{s} = 630$ GeV and 1800 GeV," Phys. Rev. D **64**, 032003 (2001).
20. B. Abbott *et al.*, "A quasi-model-independent search for new high p_T physics at DØ" Phys. Rev. Lett. **86**, 3712 (2001).
21. B. Abbott *et al.*, "A quasi-model-independent search for new physics at large transverse momentum," Phys. Rev. D **64**, 012004 (2001).
22. B. Abbott *et al.*, "Inclusive jet production in p \bar{p} collisions," Phys. Rev. Lett. **86**, 1707 (2001).
23. B. Abbott *et al.*, "Differential cross section for W boson production as a function of transverse momentum in p \bar{p} collisions at $\sqrt{s} = 1.8$ TeV," Phys. Lett. B **513**, 292 (2001).

24. B. Abbott *et al.*, "Measurement of the angular distribution of electrons from $W \rightarrow e\nu$ decays observed in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. D **63**, 072001 (2001).
25. B. Abbott *et al.*, "Ratios of multijet cross sections in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **86**, 1955 (2001).
26. B. Abbott *et al.*, "The ratio of jet cross sections at $\sqrt{s} = 630$ GeV and 1800 GeV," Phys. Rev. Lett. **86**, 2523 (2001).
27. B. Abbott *et al.*, "Search for large extra dimensions in dielectron and diphoton production," Phys. Rev. Lett. **86**, 1156 (2001).
28. B. Abbott *et al.*, "Search for electroweak production of single top quarks in $p\bar{p}$ collisions," Phys. Rev. D **63**, 031101 (2001).
29. B. Abbott *et al.*, "Cross section for b jet production in $\bar{p}p$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **85**, 5068 (2000).
30. B. Abbott *et al.*, "Search for new physics in $e\mu X$ data at DØ using Sherlock: A quasi model independent search strategy for new physics," Phys. Rev. D **62**, 092004 (2000).
31. B. Abbott *et al.*, "Search for R-parity violation in multilepton final states in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. D **62**, 071701 (2000).
32. B. Abbott *et al.*, "A search for dilepton signatures from minimal low-energy supergravity in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. D **63**, 091102 (2001).
33. B. Abbott *et al.*, "Spin correlation in $t\bar{t}$ production from $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **85**, 256 (2000).
34. B. Abbott *et al.*, "A measurement of the $W \rightarrow \tau\nu$ production cross section in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **84**, 5710 (2000).
35. B. Abbott *et al.*, "Hard single diffraction in $\bar{p}p$ collisions at $\sqrt{s} = 630$ GeV and 1800 GeV," Phys. Lett. B **531**, 52 (2002).
36. B. Abbott *et al.*, "Limits on anomalous $WW\gamma$ and WWZ couplings from $WW/\bar{W}Z \rightarrow e\nu jj$ production," Phys. Rev. D **62**, 052005 (2000).
37. B. Abbott *et al.*, "Probing BFKL dynamics in the dijet cross section at large rapidity intervals in $p\bar{p}$ collisions at $\sqrt{s} = 1800$ GeV and 630 GeV," Phys. Rev. Lett. **84**, 5722 (2000).
38. B. Abbott *et al.*, "Limits on quark compositeness from high-energy jets in $\bar{p}p$ collisions at 1.8 TeV," Phys. Rev. D **62**, 031101 (2000).
39. B. Abbott *et al.*, "The isolated photon cross-section in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **84**, 2786 (2000).
40. B. Abbott *et al.*, "Search for second generation leptoquark pairs in $\bar{p}p$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **84**, 2088 (2000).

41. B. Abbott *et al.*, "A measurement of the W boson mass using electrons at large rapidities," Phys. Rev. Lett. **84**, 222 (2000).
42. B. Abbott *et al.*, "Differential production cross section of Z bosons as a function of transverse momentum at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **84**, 2792 (2000).
43. B. Abbott *et al.*, "A measurement of the W boson mass using large rapidity electrons," Phys. Rev. D **62**, 092006 (2000).
44. B. Abbott *et al.*, "Evidence of color coherence effects in W + jets events from p \bar{p} collisions at $\sqrt{s} = 1.8$ TeV," Phys. Lett. B **464**, 145 (1999).
45. B. Abbott *et al.*, "Small angle muon and bottom quark production in p \bar{p} collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **84**, 5478 (2000).
46. B. Abbott *et al.*, "Search for R-parity violating supersymmetry in the dielectron channel," Phys. Rev. Lett. **83**, 4476 (1999).
47. B. Abbott *et al.*, "Measurement of the inclusive differential cross section for Z bosons as a function of transverse momentum in p \bar{p} collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. D **61**, 032004 (2000).
48. B. Abbott *et al.*, "Extraction of the width of the W boson from measurements of $\sigma(p \bar{p} \rightarrow W + X) \times B(W \rightarrow e \nu)$ and $\sigma(p \bar{p} \rightarrow Z + X) \times B(Z \rightarrow e e)$ and their ratio," Phys. Rev. D **61**, 072001 (2000).
49. B. Abbott *et al.*, "The b \bar{b} production cross section and angular correlations in p \bar{p} collisions at $\sqrt{s} = 1.8$ TeV," Phys. Lett. B **487**, 264 (2000).
50. B. Abbott *et al.*, "Studies of W W and W Z production and limits on anomalous W W γ and W W Z couplings," Phys. Rev. D **60**, 072002 (1999).
51. B. Abbott *et al.*, "Search for second generation leptoquark pairs decaying to $\mu\nu$ + jets in p \bar{p} collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **83**, 2896 (1999).
52. B. Abbott *et al.*, "Search for charged Higgs bosons in decays of top quark pairs," Phys. Rev. Lett. **82**, 4975 (1999).
53. B. Abbott *et al.*, "Search for bottom squarks in p \bar{p} collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. D **60**, 031101 (1999).
54. B. Abbott *et al.*, "Search for squarks and gluinos in events containing jets and a large imbalance in transverse energy," Phys. Rev. Lett. **83**, 4937 (1999).
55. B. Abbott *et al.*, "Measurement of W and Z boson production cross sections," Phys. Rev. D **60**, 052003 (1999).
56. B. Abbott *et al.*, "Measurement of the top quark pair production cross section in the all-jets decay channel," Phys. Rev. Lett. **83**, 1908 (1999).

57. B. Abbott *et al.*, "Measurement of the high-mass Drell-Yan cross section and limits on quark-electron compositeness scales," Phys. Rev. Lett. **82**, 4769 (1999).
58. B. Abbott *et al.*, "Search for nonstandard Higgs bosons using high mass photon pairs in $p\bar{p} \rightarrow \gamma\gamma + 2\text{jets}$ at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **82**, 2244 (1999).
59. B. Abbott *et al.*, "Probing hard color-singlet exchange in $p\bar{p}$ collisions at $\sqrt{s} = 630$ GeV and 1800 GeV," Phys. Lett. B **440**, 189 (1998).
60. B. Abbott *et al.*, "Measurement of the top quark pair production cross section in $p\bar{p}$ collisions using multijet final states," Phys. Rev. D **60**, 012001 (1999).
61. B. Abbott *et al.*, "Measurement of the top quark mass in the dilepton channel," Phys. Rev. D **60**, 052001 (1999).
62. B. Abbott *et al.*, "Search for squarks and gluinos in single-photon events with jets and large missing transverse energy in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **82**, 29 (1999).
63. B. Abbott *et al.*, "Small angle J/ψ production in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **82**, 35 (1999).
64. B. Abbott *et al.*, "The inclusive jet cross section in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **82**, 2451 (1999).
65. B. Abbott *et al.*, "The dijet mass spectrum and a search for quark compositeness in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV," Phys. Rev. Lett. **82**, 2457 (1999).

Other Publications:

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